



Waste Fluorescent Lamp Management for Households and Farmers

Hazardous Waste Program fact sheet

7/2003

Background

Certain fluorescent lamps may contain toxic metals such as mercury, cadmium and lead. Unbroken lamps pose minimal threat to human health or the environment. However, fluorescent lamps contain mercury vapor under pressure, and when they are broken, people may be exposed to toxic levels of mercury vapor and other metals. Studies show that about 80 percent of elemental mercury inhaled may be absorbed into the lungs of humans. Toxic metals accumulate in living tissues and may cause severe nervous system damage.

About 500 million lamps are disposed of each year in the United States. Eighty-two percent are landfilled, 16 percent are incinerated and two percent are recycled. Programs to replace older, less efficient lamps have increased the disposal rate. With approximately 500 million lamps replaced annually, 32,000 to 36,000 pounds of mercury may enter our nation's sanitary landfills and the atmosphere each year.

The Missouri Department of Natural Resources encourages prudent lamp recycling to safeguard human health and to limit the amounts of toxic heavy metals entering the environment.

Fluorescent Lamps Described

There are various sizes and types of fluorescent lamps. Typically four and eight-foot long lamps are used in homes, offices and institutions and high-intensity discharge (HID) lamps such as mercury vapor, metal halide, high pressure sodium and neon lamps are commonly used by farms, businesses and cities.

A 40-watt, four-foot long tube contains 27 to 40 milligrams (mg) of elemental mercury. The amount of mercury in a lamp is roughly proportional to its length with older lamps containing much higher amounts. HID lamps may contain between 13 and 250 mg of mercury per lamp.

Fluorescent lamps are long-lasting and energy efficient compared to standard light bulbs. Use of fluorescent lamps is expected to increase. Some manufacturers are now producing more energy efficient lamps with less mercury.

Management Options

You may put fluorescent lamps from your own household or farm into the trash for disposal in one of Missouri's sanitary landfills. If your community has a local household hazardous waste collection program, a Universal Waste handler or a certified recycler that will accept lamps, the department encourages you to send your lamps to such a facility to better protect the environment. Call first to assure that the lamps will be accepted.

PUB000276



To limit breakage and mercury inhalation, you may put old lamps into the boxes that the replacement lamps came in for transport to the lamp recycler or collection center.

If you dispose of a lamp in the trash, place it into the box that the replacement lamp came in. Put this in a plastic bag and secure it at the top for pickup by your trash hauler. If no box is available, use a heavy plastic bag secured at the top. These precautions will help to limit the potential for immediate breakage and inhalation hazards for you and the trash hauler.

Please note that a trash hauler has the right to refuse any waste for disposal.

General Guidance

- Never incinerate fluorescent lamps. Inhaling the toxic mercury released is harmful.
- Never crush bulbs. Crushing releases harmful mercury vapors and contaminated powder that can be inhaled.
- When replacing lamps, consider buying new lamps with lower, nonhazardous levels of heavy metal. Some manufacturers are currently advertising such lamps.
- Encourage the establishment of household hazardous waste and universal waste collection centers in your community. These centers will send the lamps to permitted treatment, storage or disposal facilities or to certified recyclers. Call the department's Environmental Assistance office at 1-800-361-4827 for information about cities that currently have such programs.
- Contact lamp manufacturers to encourage them to produce lamps with lower, nonhazardous mercury levels, and ask if they have a recycling program you may use.

Please note that this guidance is not intended for use by interim status or permitted hazardous waste treatment, storage or disposal facilities.

For more information

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